

AMENDMENTS TO THE ABSTRACT

Please replace the abstract with the following abstract:

ABSTRACT

A system is provided to reduce data burst overhead in an Ethernet passive optical network. During operation, the OLT transmits grant messages to a number of ONUs, wherein a grant message assigns a start time and a duration of a transmission timeslot in which an ONU may transmit an upstream data burst. In response to the grant messages, the OLT receives a number of upstream data bursts, wherein the time gap between two consecutive upstream data bursts is less than the summation of a default laser turn-on time, a default laser turn-off time, an AGC period, and a CDR period.